

WHAT IS CLAIMED IS:

1. A network system having a plurality of interface devices mutually connected via a communication path, for carrying out data transmission between node devices connected to the respective interface devices via the interface devices and the communication path, in which at least some of the node devices output transmission data in a form of a bi-phase modulated digital signal,

wherein

10 the interface device has a transmission conversion section for converting the transmission data from the node device connected to the interface device, into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path.

15

2. A vehicle-mounted network system based on a MOST standard, having a plurality of interface devices mutually connected so as to together form a ring-like connection via a communication path, for carrying out data transmission between node devices connected 20 to the respective interface devices via the interface devices and the communication path, in which at least some of the node devices output transmission data in a form of a bi-phase modulated digital signal,

wherein

25 the interface device has a transmission conversion section for converting the transmission data from the node device connected to the interface device, into a transmission signal subjected to

amplitude shift modulation, and outputting to the communication path.

3. The network system according to claim 1, wherein the  
5 transmission conversion section comprises:

a modulation method conversion circuit for converting the transmission data into an intermediate signal which is an NRZ modulated digital signal; and

10 an amplitude modulation circuit for modulating an amplitude of a predetermined carrier wave according to voltage variation representing a bit sequence of the intermediate signal, to thereby generate the transmission signal.

4. The network system according to claim 2, wherein the  
15 transmission conversion section comprises:

a modulation method conversion circuit for converting the transmission data into an intermediate signal which is an NRZ modulated digital signal; and

20 an amplitude modulation circuit for modulating an amplitude of a predetermined carrier wave according to voltage variation representing a bit sequence of the intermediate signal, to thereby generate the transmission signal.

5. The network system according to claim 1, wherein the interface  
25 device comprises a reception conversion section for receiving the transmission signal to be transmitted to the node device connected to the interface device, from the communication path, converting

into reception data which is a bi-phase modulated digital signal, and forwarding to the node device.

6. The network system according to claim 2, wherein the interface device comprises a reception conversion section for receiving the transmission signal to be transmitted to the node device connected to the interface device, from the communication path, converting into reception data which is a bi-phase modulated digital signal, and forwarding to the node device.

10

7. The network system according to claim 1, wherein the node device comprises a reception conversion section for converting the transmission signal received into reception data which is a bi-phase modulated digital signal.

15

8. The network system according to claim 2, wherein the node device comprises a reception conversion section for converting the transmission signal received into reception data which is a bi-phase modulated digital signal.

20

9. An interface device for use in a data communication network in which a plurality of nodes are connected to one another via a communication path, intervening, in each node, between a node device for transmission and reception of data and the communication path, comprising:

    a transmission conversion section for converting transmission data which is output from the node device in a form

of a bi-phase modulated digital signal into a transmission signal subjected to amplitude shift modulation, and outputting to the communication path.

5 10. The interface device according to claim 9, wherein the transmission conversion section comprises:

    a modulation method conversion circuit for converting the transmission data into an intermediate signal which is an NRZ modulated digital signal; and

10       an amplitude modulation circuit for modulating an amplitude of a carrier wave according to voltage variation representing a bit sequence of the intermediate signal.

11. The interface device according to claim 9, further comprising  
15 a reception conversion section for receiving the transmission signal to be transmitted to the node device connected to the interface device, from the communication path, converting into reception data which is a bi-phase modulated digital signal, and forwarding to the node device.